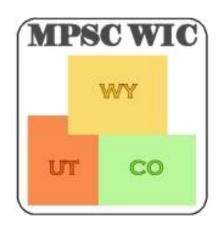
# Mountain Plains States Consortium WIC System Project

# **DDI DELIVERABLE #07**

# VM 8 VENDOR MANAGEMENT HIGH RISK VENDOR ANALYSIS SCREENS DFDD

# (DETAILED FUNCTIONAL DESIGN DOCUMENT)

# Presented to:



**Revision Date: December 21 2007** 

Prepared by



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# **Document Revisions**

Revision Date	Updated By	Requested By	Description of Revision
8/23/07	CIBER	MPSC	Revision Version
11/30/07	CIBER	MPSC	Final Version
12/21/07	CIBER	MPSC	Updated Final Version

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# 1 High Risk Vendor Analysis - Configurations

High Risk Vendor Analysis is the analysis of vendor data to determine high risk vendors using query-based indicators. High Risk Vendor Analysis had its origin in the Applied Research Vendor Abuse (ARVA) body of work that was done in the 1980s. It has evolved over time and encompasses more than ARVA, which is why this area was labeled as High Risk Vendor Analysis. It now carries a focus toward TIP reporting factors. The general purpose of High Risk Vendor Analysis is to provide support to the vendor coordinators in determining potential high risk vendor candidates. This support is in the form of sophisticated queries that flag these candidates. The vendor coordinator has the ability to mark vendors for high risk factors in the vendor management system area.

Being query based, High Risk Vendor Analysis is implemented out of the Report tree structure (using Reporting Services) of the system. The Configuration screen allows the user to choose which queries to use to identify potential high risk vendors. The queries use system data (i.e. participants, redeemed food instruments). Also, the configuration screen allows the user to provide parameters to the queries. The output is a set of reports which are then used to manually assign risks to the vendors using the Risk screen in the vendor management module of the data system. There are no risks assigned automatically with the process.

Each state will have to pre-determine how to delivers its benefits. The choice is either through Food Instruments (FIs) or Electronic Benefit Transfer (EBT). This choice has a major impact on the available queries.

The following High Risk Vendor Analysis queries (and related configuration screen elements) are Pending ESC Approval / Funding.

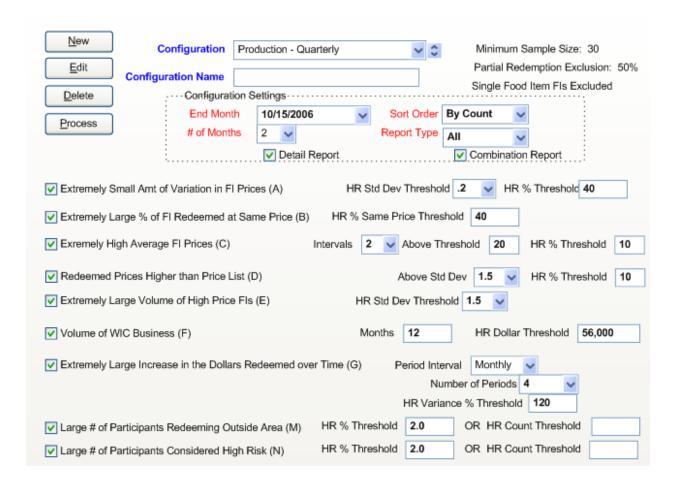
Redeemed Prices Higher Than Price List (D.) Report (FI States)

Volume of WIC Business Report (F.) (FI States)

Large Number of Participants (FI States) Families (EBT States) Redeeming Outside Their Area Report (M.)

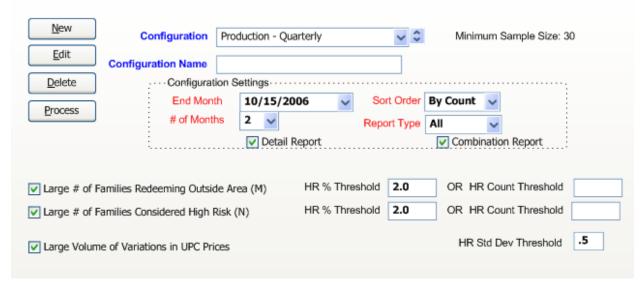
Large Number of Participants (FI States) Families (EBT States) Considered High Risk Report (N.)

#### For FI states:



Note: Bold values are reflective of the values used in the sample report.

#### For EBT States:



Note: Bold values are reflective of the values used in the sample report.

Control	Description			
New	The New comma	nd button is used to create a configuration.		
	Туре	Command Button		
	Hot Key	Alt + N		
Edit	The Edit commar	nd button is used to update a configuration.		
	Туре	Command Button		
	Hot Key Alt + T			
Delete	The Delete command button is used to delete the displayed configuration from the database.			
	Туре	Command Button		
	Hot Key	Alt + D		
Process	The Process command button is used to tell the system to process the configuration creating the reports. This configuration is processed when the button is pressed. The may experience a couple minutes' wait while the system processes the survey.			
	Туре	Command Button		
	Hot Key Alt + O			

Control		Desc	ription	
Configuration	This is the record selector for the High Risk Vendor Analysis configuration records. It contains the various configurations of high risk indicators with their parameter. The name can be reflective of the type of configuration (i.e. production or experimental) and uniqueness (i.e. Joe's). The drop-down and spin control allow selection of configuration records.			
	Туре	Record Selecto	or	
	Contents	Name		
	DB Column	HRVAReportCo	onfiguration.Confi	gurationNm
Configuration Name	A text box used	to name a new	configuration.	
	Туре	Text Box		
	Required	Yes		
	Length	50		
	Validation	NA		
	Display Only	No	Calculated	No
	DB Column	HRVAReportCo	onfiguration.Confi	gurationNm
Minimum Sample Size	This displays the vendor's minimum sample size of FIs to be included in the reports.			
	Туре	Text Box		
	Required	NA		
	Length	NA		
	Validation	NA		
	Display Only	Yes	Calculated	No
	DB Column	System Param	eter Vendor.HRM	inSampleSize
Partial Redemption Exclusion (FI States Only)	Exclusion redeemed FIs. If a FI is redeemed at below the displaye			displayed d to be partially
	Туре	Text Box		
	Required	NA		
	Length	NA		
	Validation	Formatted as a	a %	
	Display Only	Yes	Calculated	No
	DB Column System Parameter Vendor.HRPartialRedemptionPerce			

Control		Desc	ription			
Single Food Items FIs Excluded (FI States Only)	This is a display-only label.					
Configuration Settings - End Month	•	date picker used to indicate the end month for the high risk ctor queries. The system calculates the end day of the month.				
	Туре	Date Picker				
	Required	Yes				
	Display Only	No	Calculated	No		
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration		
Configuration Settings - # of Months	The number of months for the FI based query factors. In conjunction with the End Month, the time period is determined. For instance, an end month setting of 10/15/2006 with a # of Months setting of 4 yields a query that extracts records ending on 10/31/2006 and starting on 7/1/2006. The start month always starts on the 1 <sup>st</sup> of the month.					
	Type List Box					
	Required	Yes				
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration		
	Code ID	Hard coded, This code element is non-editable. The installed values are: 1, 2, 3, 4, 5, 6				
Configuration Settings - Sort Order	This determines the sorting column for the rows in the FI based query reports. "By Count" is for the column that sorts by the count. "By Factor" is for the column that sorts by the "factor" used, which is either the Std Dev column or the percentage column depending on the report.			sorts by the the "factor"		
	Туре	List Box				
	Required	Yes				
	DB Column	HRVAReportConfiguration.XMLConfiguration				
	Code ID	Hard Coded, This code element is non-editable. The installed values are: "By Count" or "By Factor"				

Control		Desc	ription			
Configuration Settings - Report Type	This determines the level of reporting in the summary report of the FI based query reports. "High Risk" shows only the rows of the vendors deemed to be high risk. "All" shows the additional rows of vendors who were not deemed to be high risk.					
	Туре	List Box				
	Required	Yes, if report A	A, B, C or E are se	elected		
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration		
	Code ID	Hard Coded, This code element is non-editable. The installed values are: "High Risk" or "All"				
Configuration Settings - Detail Report	This determines whether the accompanying detail report for the FI based query reports should be produced when the configuration is processed.					
	<b>Type</b> Checkbox					
	Display Only	No	Calculated	No		
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration		
Configuration Settings - Combination Report			companying comb			
	Туре	Checkbox				
	Display Only	No	Calculated	No		
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration		
Extremely Small Amount of Variation in FI Prices (A)		ed to indicate that this query should be included ag for this configuration.				
(FI States Only)	Туре	Checkbox				
	Display Only	ly No Calculated No				
	DB Column	olumn HRVAReportConfiguration.XMLConfiguration				

Control		Desc	ription				
HR Std Dev Threshold (FI States Only)	high risk. When	This determines the threshold for when a vendor is reported as igh risk. When a vendor has met the HR % Threshold for FIs elow this standard deviation threshold, they are reported as igh risk.					
	Туре	List Box	List Box				
	Required	Yes, if report	A checkbox is sele	ected			
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration			
	Code ID	Hard Coded, This code element is non-editable. The installed values are: .1, .2, .3, .4, .5					
HR % Threshold  (FI States Only)	high risk. When	es the threshold for when a vendor is reported as en a vendor has met this percent threshold for FIs Std Dev Threshold, they are reported as high risk.					
	Туре	Text Box					
	Required	No					
	Length	Integer 2					
	Validation	Numeric					
	Display Only	No	Calculated	No			
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration			
Extremely Large % of FIs Redeemed at the Same Price (B)	A check box used in the processing		at this query shouuration.	ıld be included			
(FI States Only)	Туре	Checkbox					
	Display Only	No	Calculated	No			
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration			
HR % Same Price Threshold  (FI States Only)	high risk. When	the threshold for when a vendor is reported as a vendor has met this percent threshold for FIs percent, they are reported as high risk.					
(11 States Only)	Туре	Text Box					
	Required	Yes, if report B checkbox is selected					
	Length	Integer 2					
	Validation	Numeric Numeric					
	Display Only	No Calculated No					
	DB Column						
		HRVAReportConfiguration.XMLConfiguration					

Control	Description					
Extremely High Average FI Prices (C)	A check box used to indicate that this query should be included in the processing for this configuration.					
(FI States only)						
	Туре	Checkbox				
	Display Only	No Calculated No				
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration		
Intervals (FI States Only)	This determines the summary report Threshold value.	ort. The range	ues of the inner f is are derived fro			
	Туре	List Box				
	Required	Yes, if report (	C checkbox is sele	ected		
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration		
	Code ID	Hard Coded, This code element is non-editable. The installed values are: 1, 2, 3, 4, 5				
Above Threshold		This determines the percentage column where a price is considered too high. It is the rightmost column of the report.				
(FI States Only)	Туре	Text Box				
	Required	Yes, if report (	C checkbox is sele	ected		
	Length	Integer 2				
	Validation	Numeric				
	Display Only	No	Calculated	No		
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration		
HR % Threshold  (FI States only)	high risk. When	ermines the threshold for when a vendor is reported as . When a vendor has met this percent threshold for FIs of a high average price (right most column), they are as high risk.				
	Туре	Text Box				
	Required	Yes, if report C checkbox is selected				
	Length	Integer 2				
	Validation	Numeric				
	Display Only	No	Calculated	No		
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration		

Control		Desc	ription	
Redeemed Prices Higher Than Price List (D)	A check box used to indicate that this query should be included in the processing for this configuration.			
(FI States Only)	Туре	Checkbox		
	Display Only	No Calculated No		
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration
	Туре	Text Box		
Above Std Dev	This determines is considered to		viation level whe	re a redemption
(FI States Only)	Туре	List Box		
	Required	Yes, if report [	Checkbox is sele	ected
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration
	Code ID	Hard Coded, This code element is non-editable.		
		The installed v	alues are:	
		1.5, 2.0, 2.5,	3.0	
HR % Threshold	high risk. When	a vendor has m n average price	or when a vendor net this percent tl (right most colur	nreshold for FIs
(FI States Only)	Туре	Text Box		
	Required	Yes, if report [	Checkbox is sele	ected
	Length	Integer 2		
	Validation	Numeric		
	Display Only	No	Calculated	No
	DB Column	HRVAReportConfiguration.XMLConfiguration		
Extremely Large Volume of High Priced FIs (E)		d to indicate that this query should be included g for this configuration.		
(FI States Only)	Туре	Checkbox		
	Display Only	No	Calculated	No
	DB Column	HRVAReportConfiguration.XMLConfiguration		

Control		Desc	ription		
HR Std Dev Threshold (FI States only)	This determines the threshold for when a vendor is reported as high risk. When a vendor has FIs that are above this standard deviation threshold, they are reported as high risk.				
	Туре	List Box			
	Required	Yes, if report E	checkbox is sele	ected	
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration	
	Code ID	Hard Coded,			
		This code elem	nent is non-edital	ole.	
		The installed v	alues are:		
		1.5, 2.0, 2.5,	3.0		
Volume of WIC Business (F)		d to indicate that this query should be included g for this configuration.			
(FI States Only)	Туре	Checkbox			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration	
Months	This determines of WIC business.		months to accum	ulate the dollars	
(FI States Only)	Туре	Text Box			
	Required	Yes, if report F	checkbox is sele	ected	
	Length	Integer 2			
	Validation	Numeric			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration	
HR Dollar Threshold	high risk. When	the threshold for when a vendor is reported as a vendor has met this dollar threshold for WIC re reported as high risk.			
(FI States Only)	Туре	Text Box			
	Required	Yes, if report F checkbox is selected			
	Length	Integer 7			
	Validation	Numeric, Mask of \$9,999			
	Display Only	No <b>Calculated</b> No			
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration	

Control	Description				
Extremely Large Increase In Dollars of FIs Redeemed Over Time (G)	A check box used to indicate that this query should be included in the processing for this configuration.				
(FI States Only)	Туре	Checkbox			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration	
Period Interval	This determines Quarterly is a ro		he columns on th Jarter based on t		
(FI States Only)	Туре	List Box			
	Required	Yes, if report (	G checkbox is sele	ected	
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration	
	Code ID	Hard Coded, This code element is non-editable. The installed values are: "Monthly" or "Quarterly"			
Number of Periods	This determines report.	the number of p	period interval co	lumns on the	
(FI States Only)	Туре	List Box			
	Required	Yes, if report 0	G checkbox is sele	ected	
	DB Column	HRVAReportCo	onfiguration.XML0	CONFIGURATION	
	Code ID	Hard Coded, This code element is non-editable. The installed values are: 2, 3 or 4			
HR Variance % Threshold	high risk. When threshold consist	nines the threshold for when a vendor is reported as When a vendor has met this percent variance onsistently across all the time periods presented on they are reported as high risk.			
(FI States Only)	Туре	Text Box			
	Required	Yes, if report G checkbox is selected			
	Length	Integer 3			
	Validation	Numeric			
	Display Only	No Calculated No			
	DB Column	HRVAReportConfiguration.XMLConfiguration			

Control	Description				
Large # of Participants Redeeming Outside Area (M)	A check box used to indicate that this query should be included in the processing for this configuration.				
(FI States Only)	Туре	Checkbox			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration	
Large # of Families Redeeming Outside Area (M)	A check box used in the processing		at this query shouuration.	ıld be included	
(EBT States Only)	Туре	Checkbox			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XML0	Configuration	
HR % Threshold	high risk. When	nes the threshold for when a vendor is reported as nen a vendor has met this percent threshold for FIs are redeemed outside of area, they are reported as			
	Туре	Text Box			
	Required	No			
	Length	Decimal 3,1			
	Validation	Numeric			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration	
HR Count Threshold	high risk. When	a vendor has m	or when a vendor net this count thro of area, they are	eshold for FIs or	
	Туре	Text Box			
	Required	No			
	Length	Integer 5			
	Validation	Numeric			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportCo	onfiguration.XML(	Configuration	
Large # of Participants Considered High Risk (N)		d to indicate that this query should be included for this configuration.			
(FI States Only)	Туре	Checkbox			
	Display Only	No	Calculated	No	
	DB Column	HRVAReportConfiguration.XMLConfiguration			

Control		Desc	ription					
Large # of Families Considered High Risk (N)	A check box used in the processing		at this query shou uration.	ıld be included				
(EBT States Only)	Туре	Checkbox						
	Display Only	No	Calculated	No				
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration				
HR % Threshold		a vendor has m	or when a vendor net this percent th ted as high risk.					
	Туре	Text Box						
	Required	No						
	Length	Decimal 3,1						
	Validation	Numeric						
	Display OnlyNoCalculatedNo							
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration				
HR Count Threshold		a vendor has m	or when a vendor net this count thro ted as high risk.					
	Туре	Text Box						
	Required	No						
	Length	Integer 5						
	Validation	Numeric						
	Display Only	No	Calculated	No				
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration				
Large Volume of Variation in UPC Prices		ed to indicate that this query should be included g for this configuration.						
(EBT States Only)	Туре	Checkbox						
	Display Only	ly No Calculated No						
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration				

Control		Desc	ription				
HR Std Dev Threshold (EBT States Only)	high risk. When	a vendor has U	or when a vendor PCs that are above ported as high ris	ve this standard			
	Туре	Text Box					
	Required	Yes, if the che	ckbox is selected				
	Length	Length Decimal 2,1					
	Validation	Numeric					
	Display Only	Display Only No Calculated No					
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration			
<last and="" by="" date="" modified="" user=""></last>			the user and the order are displayed.	date of the last			
	Туре	Text Box					
	Required	No					
	Length	NA					
	Validation	Mask of `firstname lastname mm/dd/yyyy'					
	Display Only	y Yes Calculated No					
	DB Column	HRVAReportCo	onfiguration.XMLC	Configuration			

#### **Business Rules**

- 1. For every query checkbox, the parameters that are directly associated with it (on the same line) are disabled when the checkbox is unchecked. If values are in the checkbox before it is unchecked, they are retained.
- 2. The Process button requires that either the combination report be selected or at least one query be selected.
- 3. The "C" Report's Above Threshold value must be at least 5 times the values of the Intervals because the report has the "Above" column, five "interval" columns and a "Below" column.
- 4. If report M checkbox is selected, then either its respective HR % Threshold or HR Count Threshold is required.
- 5. If report N checkbox is selected, then either its respective HR % Threshold or HR Count Threshold is required.

#### **Developer Notes**

- 1. The processing of the high risk vendor queries requires an integration of the application with Reporting Services that may impact where the Configurations (and Display FI Contents) function is found in the system.
- 2. It is assumed that the configuration can be processed "real time," but system performance may deem them to be processed during batch hours.

# **Developer Notes**

- 3. Ignore any FI that has the Reissue to Vendor indicator set to Yes.
- 4. Specifications for the query and report format are contained in the section below and in the mock reports.

System Parameter	Purpose	Format
Vendor.HRPartialRedem ptionPercentage	For High Risk Vendor Analysis queries, this number is to determine when to ignore a redeemed FI. The percentage is used with the NTE to determine when a FI is considered to be "partially redeemed". Likely to be around 50%. (Number between 0 and 1 (Percentage))	Decimal
Vendor.MinHRSampleSiz e	For High Risk Vendor Analysis queries, this number is the minimum number of FIs that must be in the sample size for the FI to be considered for analysis.  Statistical recommendation is a value of 30.	Integer

# 2 Extremely Small Amount of Variation in Food Instrument Prices (A.) Report

This is available only in FI States.

#### **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

HR Std Dev Threshold (list box: .1, .2, .3, .4, .5)

HR Percent in Threshold (text box: 1 to 100 percent)

Sort order: (list box: "By Count", "By Factor")

Report Type (list box of High Risk or All)

**Detail Report Checkbox** 

- Extract the redemption data into buckets based on the user input of Start Date and Number of Months.
  - Query End date is the last day of "End Date" month submitted
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - Excludes redemptions:
    - Eliminate any FIs that contain a single food item (regardless of quantity).
    - Eliminate partially redeemed FIs where actual price is less than the percentage found in the system parameter
       Vendor.HRPartialRedemptionPercentage as compared to the FI's NTE.
    - Eliminate any FIs for any vendor whose count is not greater than the sample size value found in the system parameter Vendor.HRSampleSizeMinimum.
- Report has 6 buckets. The first is the HR Std Dev Threshold and below. Determine the next 4 buckets by multiplying the Threshold by 2, 3, 4 and 5. The last bucket is multiplied by 5 (and above). For example a .2 Threshold value would yield buckets of "Above 1", "1.0 to 8", ".8 to .6", ".6 to .4", ".4 to .2", and ".2 and below".
- For each vendor:
  - Calculate the average redemption price for each of their FIs.
  - o Calculate the standard deviation for each of their FIs
  - Compare the average redemption price to the actual price and determine which bucket to add to the count.
- Sort the vendor data by the "Threshold" column depending on user input (either "By Count then By Factor" or "By Factor then By Count").
- Print the High Risk Vendors (with asterisk) based on whether they have a threshold value.

- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- If the Detail Requested checkbox is checked, then the Detail Report is created. The detail report contains the detail information concerning the FIs that put the vendor in the High Risk status.
  - Group by Vendor
  - Sort within vendor by #Std Dev (Ascending), FI (Ascending) then Date (Ascending)

# **Report Example - Summary**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Extremely Small Amount of Variation in Food Instrument Prices (A.)

Time Period September 1, 2006 through October 30, 2006

Vendor	PG	HR	Total	Above 1	Pct.	1 to .8	Pct.	.8 to .6	Pct.	.6 to .4	Pct.	.4 to .2	Pct.	Below .2	Pct.
31-141	2	*	39	5	13%	2	5%	3	8%	5	13%	3	8%	21	54%
23-442	3	*	2,750	423	15%	342	12%	256	9%	342	12%	123	4%	1,264	46%
23-436	1	*	1,622	245	15%	234	14%	163	10%	167	10%	134	8%	679	42%
19-383	2		10,449	1,394	13%	1,200	11%	1,183	11%	1,328	13%	1,341	13%	4,003	38%
12-465	3		1,889	233	12%	325	17%	234	12%	242	13%	143	8%	712	38%

# **Report Example - Detail**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Extremely Small Amount of Variation in Food Instrument Prices (A.) - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 31-141: 21		200			7573 75	2200	
FI	Check#	Avg Price	Std Dev	#Std Dev	Actual	Date	Family ID
456	23452	\$25.34	\$0.21	0.00	\$25.34	9/3/2006	150870
456	23483	\$25.34	\$0.21	0.00	\$25.34	9/13/2006	150841
456	25728	\$25.34	\$0.21	0.00	\$25.34	9/24/2006	150870
2313	24573	\$19.56	\$0.13	0.00	\$19.56	9/3/2006	49357
2313	21928	\$19.59	\$0.13	0.00	\$19.59	9/3/2006	234833
2313	23447	\$19.56	\$0.13	0.00	\$19.56	10/24/2006	12340
2313	23956	\$19.59	\$0.13	0.00	\$19.59	10/24/2006	34263
2313	24394	\$19.59	\$0.13	0.00	\$19.59	10/30/2006	234833
2313	26938	\$19.56	\$0.13	0.08	\$19.57	9/6/2006	12340
2313	28583	\$19.56	\$0.13	0.08	\$19.57	9/24/2006	12340
2313	23039	\$19.56	\$0.13	0.08	\$19.57	10/11/2006	49357
456	23858	\$25.34	\$0.21	0.10	\$25.36	9/6/2006	150870
456	23493	\$25.34	\$0.21	0.10	\$25.36	9/15/2006	150870
456	23489	\$25.34	\$0.21	0.10	\$25.36	9/22/2006	150870
456	23478	\$25.34	\$0.21	0.10	\$25.36	9/26/2006	150841
456	25833	\$25.34	\$0.21	0.10	\$25.36	10/1/2006	150870
456	23473	\$25.34	\$0.21	0.10	\$25.36	10/1/2006	150841
456	23959	\$25.34	\$0.21	0.10	\$25.36	10/30/2006	150870
2313	29248	\$19.56	\$0.13	0.15	\$19.58	9/15/2006	12340
2313	28494	\$19.56	\$0.13	0.15	\$19.58	10/1/2006	49357
456	28464	\$25.34	\$0.21	0.19	\$25.38	10/12/2006	150841
Vendor 23-442: 2,56	69						
FI	Check#	Avg Peer	% -age	% -age	Actual	Date	Family ID

# 3 Extremely Large Percent of Food Instrument Redeemed at the Same Price (B.) Report

This is available only in FI states.

### **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

HR% Same Price Threshold (text box: percent between 1 and 100)

Sort order: (list box: "By Count", "By Factor")

Report Type (list box of High Risk or All)

Detail Report Checkbox

- Extract the redemption data into buckets based on the user input of Start Date and Number of Months.
  - Query End date is the last day of "End Date" month submitted
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - Excludes redemptions:
    - Eliminate any FIs that contain a single food item (regardless of quantity).
    - Eliminate partially redeemed FIs where actual price is less than the percentage found in the system parameter
       Vendor.HRPartialRedemptionPercentage as compared to the FI's NTE.
    - Eliminate any FIs for any vendor whose count is not greater than the sample size value found in the system parameter Vendor.HRSampleSizeMinimum
- For each vendor:
  - Count the total number of FIs.
  - Create counts of each uniquely redeemed prices.
  - Pull the highest count and compare it to the total number of FIs.
- Sort the vendor data by the "Threshold" column depending on user input (either "By Count then By Factor" or "By Factor then By Count").
- Print the High Risk Vendors (with asterisk) based on whether they met the "Same" threshold.
- If the user input is a Report Type of All, print blank line and print remaining records without asterisk down to 50% of what the threshold was. These records could contain the same vendor (two different same prices but with high occurrence). This eliminates the pages of records of same prices with a low percent.
- If the Detail Report checkbox is checked, then the Detail Report is created. The detail report contains the detail information concerning the FIs that put the vendor in the High Risk status.

- o Group by Vendor
  - Sort within vendor by Date (Ascending), FI (Ascending) then Person ID (Ascending)

# **Report Example - Summary**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Extremely Large Percent of Food Instruments Redeemed at the Same Price (B.)

Time Period September 1, 2006 through October 30, 2006

Vendor	PG	HR	Total Fis	Same	Pct.	Same Price
23-456	3	*	59	26	44%	\$21.00
26-347	1	*	750	325	43%	\$23.50
01-456	3	*	38	16	42%	\$26.00
13-426	2	*	14,176	5,883	41%	\$24.00
11-034	1	*	830	337	41%	\$14.00
12-468	2	*	158	63	40%	\$14.25
12-294	3		466	183	39%	\$15.50

# **Report Example - Detail**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Extremely Large Percent of Food Instruments Redeemed at the Same Price - Detail Report (B.)

Time Period September 1, 2006 through October 30, 2006

Vendor 26-456:	26		
FI	Check#	Date	Family ID
1456	23452	9/3/2006	2738
1456	23483	9/6/2006	3469
2313	25728	9/6/2006	12340
2313	24573	9/6/2006	150870
1456	21928	9/15/2006	2738
1456	23447	9/15/2006	2738
2313	23956	9/15/2006	12340
2313	24394	9/15/2006	150870
2313	26938	9/15/2006	150870
1456	28583	9/22/2006	2738
2313	23039	9/22/2006	150870
1456	23858	9/24/2006	3469
2313	23493	9/24/2006	12340
1456	23489	9/26/2006	1234
2313	23478	9/26/2006	150841
1456	25833	10/1/2006	2738
2313	23473	10/1/2006	49357
2313	23959	10/1/2006	150841
2313	29248	10/1/2006	150870
1456	28494	10/3/2006	49357
1456	28464	10/6/2006	3469
1456	23483	10/12/2006	1234
2313	27838	10/12/2006	150841
1456	28383	10/16/2006	3469
1456	29855	10/23/2006	3469
1456	23894	10/23/2006	3469
2313	19284	10/30/2006	150870
Vendor 23-347:			
FI	Check#	Date	Family ID

# 4 Extremely High Average Food Instruments Prices (C.) Report

This is available only in FI states.

### **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

Intervals (text box: Whole percent between 1 and 5)

Above Threshold (text box: Whole percent between 5 and 99)

HR% Threshold (text box: Whole percent between 1 and 99)

Sort order: (listbox: "By Count", "By Factor")

Report Type (list box of High Risk or All)

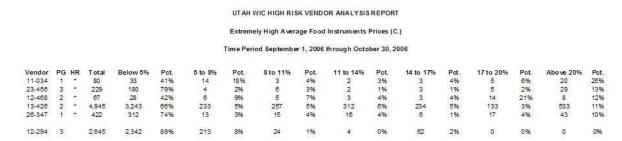
Detail Report Checkbox

- Extract the redemption data into FI buckets based on the user input of Start Date and Number of Months.
  - Query End date is the last day of "End Date" month submitted.
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - Excludes redemptions:
    - Eliminate any FIs that contain a single food item (regardless of quantity).
    - Eliminate partially redeemed FIs where actual price is less than the percentage found in the system parameter
       Vendor.HRPartialRedemptionPercentage as compared to the FI's NTE.
    - Eliminate any FIs for any vendor whose count is not greater than the sample size value found in the system parameter Vendor.HRSampleSizeMinimum.
- Calculate the average peer group redemption price for the FIs.
- Determine the report columns based on Above Threshold and Interval parameters. The rightmost column is the Above bucket. The next 5 columns are based on the intervals. The left most column is the Below column. For example, with an interval of 3 and an Above of 20, the rightmost bucket is "Above 20", the next 5 buckets are "17-20", 14-17", "11-14", "8-11", "5-8" and the leftmost bucket is "Below 5".
- For each vendor:
  - o Count the total food instruments for the time period.
  - Compare the average peer group redemption price to the actual price and add to the count in the percentage column accordingly.
  - Calculate the percentage column.

- Sort the vendor data by the "Threshold" column depending on user input (either "By Count then By Factor" or "By Factor then By Count").
- Print the High Risk Vendors (with asterisk) based on whether they have a HR % Threshold value in the High Risk column (the rightmost column).
- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- If the Detail Requested checkbox is checked, then the Detail Report is created. The detail report contains the detail information concerning the FIs that put the vendor in the High Risk status.
  - o Group by Vendor
  - Sort within vendor by %-age (Descending), FI (Ascending) then Date (Ascending)

#### **Report Example - Summary**

Bolded values shown in Configuration screen shot simulate input.



#### Report Example - Detail

Bolded values shown in Configuration screen shot simulate input.

## UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

# Extremely High Average Food Instruments Prices (C.) - Detail Report

# Time Period September 1, 2006 through October 30, 2006

Vendor 11-034:	20					
FI	Check #	Avg Peer	Pct.	Actual	Date	Family ID
2313	23452	\$19.56	25.4%	\$24.53	9/15/2006	12340
456	23483	\$25.34	24.5%	\$31.55	10/12/2006	150841
456	25728	\$25.34	24.5%	\$31.55	9/22/2006	150870
456	24573	\$25.34	24.5%	\$31.55	10/1/2006	150841
456	21928	\$25.34	24.5%	\$31.55	10/1/2006	150870
2313	23447	\$19.56	22.6%	\$23.98	10/1/2006	49357
2313	23956	\$19.56	22.6%	\$23.98	9/6/2006	12340
456	24394	\$25.34	22.3%	\$30.99	9/6/2006	150870
456	26938	\$25.34	22.3%	\$30.99	9/15/2006	150870
2313	28583	\$19.56	22.1%	\$23.88	9/24/2006	12340
456	23039	\$25.34	22.0%	\$30.91	9/26/2006	150841
456	23858	\$25.34	22.0%	\$30.91	10/30/2006	150870
736	23493	\$19.56	21.5%	\$23.77	10/30/2006	234833
2313	23489	\$19.56	21.4%	\$23.75	10/11/2006	49357
456	23478	\$25.34	21.4%	\$30.76	9/24/2006	150870
736	25833	\$19.56	21.4%	\$23.75	10/24/2006	34263
2313	23473	\$19.56	21.4%	\$23.75	10/24/2006	12340
456	23959	\$25.34	20.7%	\$30.59	9/3/2006	150870
456	29248	\$25.34	20.7%	\$30.59	9/13/2006	150841
736	28494	\$19.56	20.3%	\$23.53	9/3/2006	234833
2313	28464	\$19.56	20.1%	\$23.49	9/3/2006	49357
Vendor 23-456:						
FI	Check #	Avg Peer	Pct.	Actual	Date	Family ID

# 5 Redeemed Prices Higher Than Price List (D.) Report

This is available only in FI states.

### **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

Above Std Dev (list box: Std Dev 1.5, 2.0, 2.5, 3.0)

HR% Threshold (text box: Whole percent between 1 and 99)

Sort order: (list box: "By Count", "By Factor")

Report Type (list box of High Risk or All)

**Detail Report Checkbox** 

- Extract the Vendor FI price survey records that are within the system parameter Vendor.HRPriceSurveyValidDays. Eliminate duplicates by keeping the latest record.
   Vendor FI price survey records are created when a price survey is applied to peer group pricing.
- Extract the redemption data into Vendor FI redemption buckets based on the user input of Start Date and Number of Months.
  - Query End date is the last day of "End Date" month submitted.
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - Excludes Vendor FI redemptions:
    - Any Vendor FI redemption that does not have a Vendor FI price survey record in the extract.
    - Eliminate any Vendor FI redemptions for any vendor whose count is not greater than the sample size value found in the system parameter Vendor.HRSampleSizeMinimum.
    - Eliminate partially redeemed FIs where actual price is less than the percentage found in the system parameter Vendor.HRPartialRedemptionPercentage as compared to the FI's NTE.
    - Note: FIs that contain a single food item are acceptable to this query.
- Determine the report columns based on Above Std Dev parameter. The rightmost column is the Above bucket. The next 4 columns are based on a .5 interval. The left most column is the Below column. For example, with an Above Std Dev of 3.0, the rightmost bucket is "Above 3.0", the next 4 buckets are "2.5 to 3.0", 2.0 to 2.5", "1.5 to 2.0" and the leftmost bucket is "Below 1.5".
- For each vendor:
  - Using the Vendor FI Price Survey Record (average price and standard deviation amount), compute which bucket each of the associated Vendor FI Redemption Prices falls into.

- Calculate the percentage of the vendor buckets.
- Sort the vendor data by the "Threshold" column depending on user input (either "By Count then By Factor" or "By Factor then By Count").
- Print the High Risk Vendors (with asterisk) based on whether they have a HR % Threshold value in the High Risk column (the rightmost column).
- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- If the Detail Requested checkbox is checked, then the Detail Report is created. The detail report contains the detail information concerning the FIs that put the vendor in the High Risk status.
  - Group by Vendor
  - Sort within vendor by %-age (Descending), FI (Ascending) then Date (Ascending)

### **Report Example - Summary**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Redeemed Prices Higher Than Price List (D.)

#### Time Period September 1, 2006 through October 30, 2006

Vendor	PG	HR	Total	Below 0.5	Pct.	.5 to 1.0	Pct.	1.0 to 1.5	Pct.	1.5 to 2.0	Pct.	Above 2.0	Pct.
11-034	1	*	95	65	68%	2	2%	3	3%	5	5%	20	21%
23-456	3	*	229	190	83%	2	1%	3	1%	5	2%	29	13%
12-468	2	*	67	39	58%	3	4%	3	4%	14	21%	8	12%
13-426	2	*	4,922	3,710	75%	312	6%	234	5%	133	3%	533	11%
26-347	1	*	422	340	81%	16	4%	6	1%	17	4%	43	10%
12-294	3		2,464	2,342	95%	4	0%	62	3%	0	0%	56	2%

# Report Example - Detail

Bolded values shown in Configuration screen shot simulate input.

## **UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT**

## Redeemed Prices Higher Than Price List (D.) - Detail Report

#### Time Period September 1, 2006 through October 30, 2006

Vendor 11-034: 20							
FI	Check #	Avg Peer	Std Dev	#Std Dev	Actual	Date	Family ID
1736	23452	\$19.59	\$0.32	2.72	\$20.46	10/30/2006	234833
1452	23483	\$25.34	\$0.42	2.64	\$26.45	9/24/2006	150870
1736	25728	\$19.59	\$0.32	2.63	\$20.43	9/3/2006	49357
1452	24573	\$25.34	\$0.42	2.60	\$26.43	9/13/2006	150841
1736	21928	\$19.59	\$0.32	2.59	\$20.42	10/24/2006	12340
1736	23447	\$19.59	\$0.32	2.44	\$20.37	10/11/2006	49357
1736	23956	\$19.59	\$0.32	2.44	\$20.37	9/6/2006	12340
1736	24394	\$19.59	\$0.32	2.44	\$20.37	9/24/2006	12340
1736	26938	\$19.59	\$0.32	2.44	\$20.37	10/1/2006	49357
1452	28583	\$25.34	\$0.42	2.33	\$26.32	10/12/2006	150841
1736	23039	\$19.59	\$0.32	2.28	\$20.32	9/15/2006	12340
1452	23858	\$25.34	\$0.42	2.12	\$26.23	9/3/2006	150870
1452	23493	\$25.34	\$0.42	2.12	\$26.23	10/1/2006	150870
1452	23489	\$25.34	\$0.42	2.12	\$26.23	10/1/2006	150841
1452	23478	\$25.34	\$0.42	2.12	\$26.23	10/30/2006	150870
1452	25833	\$25.34	\$0.42	2.12	\$26.23	9/6/2006	150870
1452	23473	\$25.34	\$0.42	2.12	\$26.23	9/15/2006	150870
1452	23959	\$25.34	\$0.42	2.12	\$26.23	9/26/2006	150841
1452	23473	\$25.34	\$0.42	2.12	\$26.23	9/15/2006	150870
1452	23959	\$25.34	\$0.42	2.12	\$26.23	9/26/2006	150841
Vendor 23-456: 15							
FI	Check #	Avg Peer	Std Dev	#Std Dev	Actual	Date	Family ID

...

# 6 Extremely Large Volume of High Priced Food Instruments (E.) Report

This is available only in FI states.

### **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

HR Std Dev Threshold (list box: 1.5, 2, 2.5 or 3)

Sort order: (list box: "By Count", "BY Factor")

Report Type (list box of High Risk or All)

**Detail Report Checkbox** 

- Extract the redemption data into buckets based on the user input of Start Date and Number of Months.
  - Query End date is the last day of "End Date" month submitted.
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - Excludes redemptions:
    - Eliminate any FIs that contain a single food item (regardless of quantity).
    - Eliminate partially redeemed FIs where actual price is less than the percentage found in the system parameter
       Vendor.HRPartialRedemptionPercentage as compared to the FI's NTE.
    - Eliminate any FIs for any vendor whose count is not greater than the sample size value found in the system parameter Vendor.HRSampleSizeMinimum.
- Report has 5 buckets (columns). The last column is the Above Std Dev and above. From right to left, determine the middle 3 columns by creating the boundaries by dividing the Above Std parameter by 3. The leftmost column is "Below 0". For example an Above Std Dev Threshold value of 1.5 yields columns of "Above 1.5", "1.0 to 1.5", ".5 to 1.0", "0 to .5" and "Below 0". Another example, an Above Std Dev Threshold value of 2.0 yields columns of "Above 2.0", "1.33 to 2.0", ".67 to 1.33", "0 to .67" and "Below 0".
- For each vendor:
  - o For the last production price survey, calculate the food container average redemption price and save the corresponding peer group standard deviation for the food container. Using this information, calculate each FI in the system. Note: If a FI contains a food container that has no Vendor Survey Food Container record, then do not calculate or store the calculation. There is no Vendor Price Survey FI record for the report D. (THIS IS EXPLAINED IN MORE DETAIL IN THE PRICE SURVEY DFDD).
  - Compare the average redemption price to the actual price and determine which bucket to add to the count.

#### **EXAMPLE:**

Set up the following buckets:

FI	Below .5	0.5 to 1.0	1.0 to 1.5	1.5 to 2.0	Above 2.0
123	Below \$7.35	\$7.36 to \$7.50	\$7.51 to \$7.65	\$7.66 to \$7.80	\$7.81 and above

Compare FI redemption prices against this Vendor Price Survey FI record.

The vendor has 3 of these FIs priced at \$7.32, \$7.55 and \$7.90. The counts are:

FI	Below .5	0.5 to 1.0	1.0 to 1.5	1.5 to 2.0	Above 2.0
123	Below \$7.35	\$7.36 to \$7.50	\$7.51 to \$7.65	\$7.66 to \$7.80	\$7.81 and above
123	1	0	1	0	1

- Sort the vendor data by the "Threshold" column depending on user input (either "By Count then By Factor" or "By Factor then By Count").
- Print the High Risk Vendors (with asterisk) based on whether they have a Threshold value.
- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- If the Detail Requested checkbox is checked, then the Detail Report is created. The detail report contains the detail information concerning the FIs that put the vendor in the High Risk status.
  - Group by Vendor
  - Sort within vendor by #Std Dev (Descending), FI (Ascending) then Date (Ascending)

#### **Report Example - Summary**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

#### Extremely Large Volume of High Priced Instruments Prices (E.)

Time Period September 1, 2006 through October 30, 2006

Vendor	PG	HR	Total	Below	Pct.	0 to .5	Pct.	.5 to 1	Pct.	1 to 1.5	Pct.	Above 1.5	Pct.
23-442	3	*	1,899	1,802	95%	46	2%	31	2%	2	0%	18	1%
23-436	1	*	2,206	1,716	78%	436	20%	39	2%	0	0%	15	1%
19-383	2	*	1,444	1,394	97%	10	1%	30	2%	0	0%	10	1%
31-141	2	*	1,227	1,047	85%	158	13%	14	1%	0	0%	8	1%
12-465	3		2,716	2,456	90%	23	1%	213	8%	24	1%	0	0%

## Report Example - Detail

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Extremely Large Volume of High Priced Instruments Prices (E.) - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 23-442:	18						
FI	Check #	Avg Peer	Std Dev	#Std Dev	Actual	Date	Family ID
2313	23452	\$19.59	\$0.32	2.72	\$20.46	10/30/2006	234833
456	23483	\$25.34	\$0.42	2.64	\$26.45	9/24/2006	150870
2313	25728	\$19.59	\$0.32	2.63	\$20.43	9/3/2006	49357
456	24573	\$25.34	\$0.42	2.33	\$26.32	9/13/2006	150841
2313	21928	\$19.59	\$0.32	1.94	\$20.21	10/24/2006	12340
2313	23447	\$19.59	\$0.32	1.84	\$20.18	10/11/2006	49357
2313	23956	\$19.59	\$0.32	1.75	\$20.15	9/6/2006	12340
2313	24394	\$19.59	\$0.32	1.75	\$20.15	9/24/2006	12340
2313	26938	\$19.59	\$0.32	1.75	\$20.15	10/1/2006	49357
456	28583	\$25.34	\$0.42	1.69	\$26.05	10/12/2006	150841
2313	23039	\$19.59	\$0.32	1.66	\$20.12	9/15/2006	12340
456	23858	\$25.34	\$0.42	1.60	\$26.01	9/3/2006	150870
456	23493	\$25.34	\$0.42	1.52	\$25.98	10/1/2006	150870
456	23489	\$25.34	\$0.42	1.52	\$25.98	10/1/2006	150841
456	23478	\$25.34	\$0.42	1.52	\$25.98	10/30/2006	150870
456	25833	\$25.34	\$0.42	1.50	\$25.97	9/6/2006	150870
456	23473	\$25.34	\$0.42	1.50	\$25.97	9/15/2006	150870
456	23959	\$25.34	\$0.42	1.50	\$25.97	9/26/2006	150841
Vendor 23-436:	15						
FI	Check #	Avg Peer	%-age	%-age	Actual	Date	Family ID

+..

# 7 Volume of WIC Business (F.) Report

This is available only in FI States.

# **User inputs**

End Month (Date Picker)

Months (Integer text box)

Report Type (list box of High Risk or All)

HR Dollar Threshold (Integer text box)

### **Report Creation**

- There are no excluded redemptions.
- Calculate the query start and end dates. The query end date is the last day of the End Month. The query start date is the first day of the month calculated by taking the End Month and going back the number found in the Months parameter. For instance, with an input of End Month of 10/15/2006, the end date is 10/31/2006. With an input of Months of 12, the start date is 11/1/2005.
- Accumulate the total redemption amount for each vendor for the query time period.
  - For FI States: FI amounts
- Calculate monthly redemption amount for each vendor by dividing by the number of Months.
- Sort the vendor data by the averaged amount.
- Print the High Risk Vendors (with asterisk) based on the user input of HR Dollar Threshold.
- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.

## **Report Example**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

		Average Monthly WIC	Volume of WIC Business (F.)
Vendor	HR	Business	
11-034	*	\$105,303	
23-034	*	\$75,203	
12-393	* *	\$70,333	
15-832	*	\$56,394	
13-659		\$45,239	
23-837		\$47,393	

# 8 Extremely Large Increase in the Dollars Redeemed over Time Report (G.)

This is available only in both FI States.

### **User inputs**

End Month (Date Picker)

Period Level (list box of either "Monthly" or "Quarterly")

Number of Periods (1 char text box - valid values of 2 to 4)

HR Variance % Threshold (3 char text box - numeric)

Report Type (list box of High Risk or All)

- Extract the redemption data into buckets based on the user input of Start Date, Period Level and Number of Periods.
  - Query End date is the last day of "End Date" month submitted.
  - Query Start date is the first day of the month of the following calculation: Number of Periods times the 1 (for Monthly) or 3 (for Quarterly) minus 1. Use this number to count back the number of months (i.e. 4 Quarters are 4\*3-1=11, 11 from December 2006 is January 2006 so the date is January 1, 2006).
  - o There are no excluded redemptions.
- Accumulate into buckets:
  - o For FI States: FI amounts
  - Monthly buckets: Start date month plus each previous month to number of periods
  - Quarterly buckets (rolling months): Start date month plus previous 2 months for 1<sup>st</sup> bucket. Previous 3 months for each bucket until number of periods.
- Determine each vendor's variance and percentages by starting with the first bucket and going back.
- Sort the vendor data by the variance percentages.
- Print the High Risk Vendors (with asterisk) based on the user input of HR Variance % Threshold.
- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.

# **Report Example**

Bolded values shown in Configuration screen shot simulate input.

WICHIGH RISK VENDOR A NA LYSIS REPORT													
	Extremely Large Increase in the Dollar Volume Redeemed over Time (G.)												
Quarterly t	Exam ple	•											
			Feb 2006	May 2006	Aug 2006	Period 1 to 2		Period 2 to 3		Period 3 to 4		Perio	d1to4
Vendor 11-034 23-034 12-393	HR × ×	to Jan 2006 \$26,856 \$33,423 \$23,543	to Apr 2006 \$75,203 \$70,333 \$52,394	to Jul 2006 \$159,023 \$168,393 \$123,489	to Oct 2006 \$328,393 \$387,432 \$262,934	Pct 180% 110% 123%	Variance \$48,347 \$36,910 \$28,851	Pct 111% 139% 136%	Variance \$83,820 \$98,060 \$71,095	Pct 107% 130% 113%	Variance \$169,370 \$219,039 \$139,445	Pot 133 % 127 % 124 %	Variance \$301,537 \$354,009 \$239,391
15-832	*	\$49,385	\$105,303	\$240,339	\$529,383	113%	\$55,918	128%	\$135,036	120%	\$289,044	121%	\$479,998
13-659 23-837		\$20,343 \$23,483	\$45,239 \$47,393	\$102,333 \$123,584	\$212,038 \$219,309	122% 102%	\$24,896 \$23,910	126% 161%	\$57,094 \$76,191	107% 77%	\$109,705 \$95,725	119% 113%	\$191,695 \$195,826
Monthly E	ample							Perio	d 2 to 3	Pario	nd 3 to 4	Pario	nd 2 to 4
Vendor 11-034	HR *		Aug 2006 \$57,344	Sep 2006 \$159,023	Oct 2006 \$328,393			Pct 177%	Variance \$101,679	Pct 107%	Variance \$169,370	Pct 142 %	Variance \$271,049
23-034 12-393 15-832	* *		\$70,333 \$52,394 \$105,303	\$168,393 \$123,489 \$240,339	\$387,432 \$262,934 \$529,383			139% 136% 128%	\$98,060 \$71,095 \$135,036	130% 113% 120%	\$219,039 \$139,445 \$289,044	135% 124% 124%	\$317,099 \$210,540 \$424,080
13-659 23-837			\$45,239 \$52,345	\$102,333 \$123,584	\$212,038 \$219,309			126% 136%	\$57,094 \$71,239	107% 77%	\$109,705 \$95,725	117% 107%	\$166,799 \$166,964

# 9 Large Number of Participants (*FI States*) Families (*EBT States*) Redeeming Outside Their Area Report (M.)

This is available in both FI States and EBT states.

## **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

Report Type (list box of High Risk or All)

HR % Threshold (3 char text box – numeric with one decimal place)

HR Count Threshold (4 char numeric text box)

- Extract the redemption data for each vendor by total and then within their area based on the user input of End Month and Number of Months.
  - Query End date is the last day of "End Month" month submitted.
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - There are no excluded redemptions.
- Accumulate into each vendor bucket:
  - Total Redeemed Counts and Dollar Amount (FI states FIs, EBT states -Transaction or UPC)
  - o Total Redeemed Outside of Vendor's Area: All Local Agencies have county as a required field in their address. This is utilized as the "Area" in this query.
  - For FI States: Since vendors are associated with Local Agencies and FIs are redeemed by Participants in Families that are in Clinics, a comparison can be made between where a participant got the FI versus where it was redeemed. Where "Clinic County" does not match the "Vendor County", the FI is redeemed outside of the area.
  - For EBT States: Since vendors are associated with Local Agencies and Transactions are redeemed by Families that are in Clinics, a comparison can be made between where a family got their benefits versus where they were redeemed. Where "Clinic County" does not match the "Vendor County", benefits were redeemed outside of the area.
- IF HR % Threshold parameter
  - Determine each vendor's outside area percentage by comparing Total Redeemed
     Outside of Vendor's Area to Total Redeemed.
  - Sort the vendor data by their percentages.
  - Print the High Risk Vendors (with asterisk) based on the user input of HR % Threshold.

- o If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- IF HR Count Threshold parameter:
  - Sort the vendor data by their counts.
  - Print the High Risk Vendors (with asterisk) based on the user input of HR Count Threshold.
  - If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.

# Report Example - Summary (FI States)

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Participants Redeeming Fls Outside Their Area (M.)

Time Period September 1, 2006 through October 30, 2006

# By Percentage Threshold (i.e. 2.0)

Vendor	HR	Redeemed	Count	Pct.	
11-034	*	25,839	573	2.22%	
23-021	*	23,839	512	2.15%	
12-393 *		8,293 175		2.11%	
15-832 *		183,934	3,758	2.04%	
13-659		13,482	268	1.99%	
23-837		23,945	467	1.95%	

# By Count Threshold (i.e. 450)

Vendor	HR	Redeemed	Count	Pct.
15-832	*	183,934	3,758	2.04%
11-034	*	25,839	573	2.22%
23-021	*	23,839	512	2.15%
23-837	*	23,945	467	1.95%
13-659		13,482	268	1.99%
12-393		8,293	175	2.11%

# **Report Example - Detail (FI States)**

Bolded values shown in Configuration screen shot simulate input.

#### UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Participants Redeeming Fls Outside Their Area (M.) - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 11-034: 573		<b>_</b>
Family ID	FI	Count
2348		158
	342	53
	742	45
	234	34
	2313	26
12340		113
	2313	42
	43	25
	567	23
	234	23
234833		101
	456	53
	2313	25
	234	23
1245		69
	246	31
	234	23
	4567	15
4532		66
	2343	45
	2313	21
150841		66
	2343	45
	2313	21

Vendor 23-021: 512

\*\*\*

# **Report Example – Summary (EBT States)**

Bolded values shown in Configuration screen shot simulate input.

#### WYOMING WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Families Redeeming Outside Their Area (M.)

Time Period September 1, 2006 through October 30, 2006

# By Percentage Threshold (i.e. 2.0)

Vendor	HR	Redeemed	Count	Pct.	
11-034	*	25,839	573	2.22%	
23-021	23-021 * 23		512	2.15%	
12-393	12-393 * 8.293		175	2.11%	
15-832	*	183,934	3,758	2.04%	
13-659		13,482	268	1.99%	
23-837		23,945	467	1.95%	

# By Count Threshold (i.e. 450)

Vendor	HR	Redeemed	Count	Pct.
15-832	*	183,934	3,758	2.04%
11-034 *		25,839	573	2.22%
23-021 *		23,839	512	2.15%
23-837 *		23,945	467	1.95%
13-659		13,482	268	1.99%
12-393		8,293	175	2.11%

# Report Example - Detail (EBT States)

Bolded values shown in Configuration screen shot simulate input.

#### WYOMING WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Families Redeeming Outside Their Area (M.) - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 11-034: 573
Family ID Count
2348 158
12340 113
234833 101
1245 69
4532 66
150841 66

Vendor 23-021: 512

...

# 10 Large Number of Participants (*FI States*) Families (*EBT States*) Considered High Risk Report (N.)

This is available in both FI States and EBT states.

# **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

Report Type (list box of High Risk or All)

HR % Threshold (3 char text box – numeric with one decimal place)

HR Count Threshold (4 char numeric text box)

- Extract the redemption data for each vendor by total and then within their area based on the user input of End Month and Number of Months.
  - Query End date is the last day of "End Month" month submitted.
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - o There are no excluded redemptions.
- Accumulate into each vendor bucket:
  - Total Redeemed Counts and Dollar Amount (FI states FIs, EBT states -Transaction or UPC)
  - For FI States: Total Redeemed High Risk Counts and Dollar Amount by Participant who has a status of High Risk.
  - For EBT States: Total Redeemed High Risk Counts and Dollar Amount by Families who have any participants who have a status of High Risk.
- IF HR % Threshold parameter
  - Determine each vendor's high risk percentage by comparing Total Redeemed By High Risk to Total Redeemed.
  - Sort the vendor data by their percentages.
  - Print the High Risk Vendors (with asterisk) based on the user input of HR % Threshold.
  - If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- IF HR Count Threshold parameter
  - Sort the vendor data by their counts.
  - Print the High Risk Vendors (with asterisk) based on the user input of HR Count Threshold.
  - If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- Detail Report

For FI States: Participant IDFor EBT States: Family ID

# Report Example - Summary (FI States)

Bolded values shown in Configuration screen shot simulate input.

# **UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT**

Large Number of Participants Considered High Risk (N.)

Time Period September 1, 2006 through October 30, 2006

# By Percentage Threshold (i.e. 2.0)

Vendor	HR	Redeemed	Count	Pct.
11-034	*	26,123	582	2.23%
15-832	*	24,159	516	2.14%
12-393	*	8,321	176	2.12%
11-283	*	182,334	3,812	2.09%
01-393		13,591	266	1.96%
13-659		24.003	465	1.94%

# By Count Threshold (i.e. 450)

Vendor	HR	Redeemed	Count	Pct.
11-283	*	182,334	3,812	2.09%
11-034	*	26,123	582	2.23%
15-832	*	24,159	516	2.14%
13-659	*	24,003	465	1.94%
01-393		13,591	266	1.96%
12-393		8.321	176	2.12%

# **Report Example - Detail (FI States)**

Bolded values shown in Configuration screen shot simulate input.

# UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Participants Considered High Risk (N.) - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 11-034: 582		
Part ID	FI	Count
2343		158
	342	53
	742	45
	234	34
	2313	26
46512		113
	2313	42
	43	25
	567	23
	234	23
35634		110
	456	53
	2313	34
	234	23
456		69
	246	31
	234	23
	4567	15
4547		66
	2343	45
	2313	21
16534		66
	2343	45
	2313	21

Vendor 15-832: 516

...

# **Report Example - Summary (EBT States)**

Bolded values shown in Configuration screen shot simulate input.

# WYOMING WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Families Considered High Risk (N.)

Time Period September 1, 2006 through October 30, 2006

# By Percentage Threshold (i.e. 2.0)

Vendor	HR	Redeemed	Count	Pct.
11-034	*	26,123	582	2.23%
15-832 *		24,159	516	2.14%
12-393 *		8,321	176	2.12%
11-283	×	182,334	3,812	2.09%
01-393		13,591	266	1.96%
13-659		24.003	465	1.94%

# By Count Threshold (i.e. 450)

Vendor	HR	Redeemed	Count	Pct.
11-283	*	182,334	3,812	2.09%
11-034	*	26,123	582	2.23%
15-832	*	24,159	516	2.14%
13-659	*	24,003	465	1.94%
01-393		13,591	266	1.96%
12-393		8,321	176	2.12%

# **Report Example - Detail (EBT States)**

Bolded values shown in Configuration screen shot simulate input.

#### WYOMING WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Number of Families Considered High Risk (N.) - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 11-034: 582	
Family ID	Count
2343	158
46512	113
35634	110
456	69
4547	66
16534	66

Vendor 15-832: 516

...

# 11 Large Volume of Variation in UPC Prices Report

This is available only in EBT States.

# **User inputs**

End Month (Date Picker)

Number of Months (1 char text box - valid values of 1 to 6)

HR Std Dev Threshold (numeric text box)

Sort order: (list box: "By Count", "By Factor")

Report Type (list box of High Risk or All)

**Detail Report Checkbox** 

- Extract the UPC redemption data into buckets based on the user input of Start Date and Number of Months.
  - o Query End date is the last day of "End Date" month submitted.
  - Query Start date is the first day of the month determined by counting back according to the Number of Months minus 1.
  - Excludes redemptions:
    - Eliminate any FIs for any vendor whose count is not greater than the sample size value found in the system parameter Vendor.HRSampleSizeMinimum
- Report has 5 buckets (columns). The last column is the value of the HR Std Dev Threshold and above. From right to left, determine the middle 3 columns by creating the boundaries by dividing the HR Std Dev Threshold parameter by 3. The leftmost column is "Below 0". For example, an HR Std Dev Threshold value of 0.5 yields columns of "Above .5", ".33 to .5", ".17 to .33", "0 to .17" and "Below 0". Another example, an HR Std Dev Threshold value of 1.0 yields columns of "Above 1.0", ".67 to 1.0", ".33 to .67", "0 to .33" and "Below 0".
- For each vendor:
  - o Calculate the average redemption price for each of their UPCs.
  - Calculate the standard deviation for each of their UPCs.
  - Compare the average redemption price to the actual price and determine which bucket to add to the count.
- Sort the vendor data by their "Threshold" column depending on user input (either "By Count" or "By Factor").
- Print the High Risk Vendors (with asterisk) based on whether they have a threshold value.
- If the user input is a Report Type of All, print blank line and print remaining vendors without asterisk.
- If the Detail Requested checkbox is checked, then the Detail Report is created. The detail report contains the detail information concerning the UPCs that put the vendor in the High Risk status.

- o Group by Vendor
- Sort within vendor by #Std Dev (Ascending), UPC (Ascending) then Date (Ascending)

# **Report Example – Summary**

Bolded values shown in Configuration screen shot simulate input.

# WYOMING WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Amount of Variation in UPC Prices

# Time Period September 1, 2006 through October 30, 2006

Vendor	PG	HR	Total	Below 0	Pct.	.1 to .2	Pct.	.2 to .3	Pct.	.3 to .4	Pct.	Above .5	Pct.
31-141	2	*	1,512	1,200	79%	234	15%	34	2%	23	2%	21	1%
23-442	3	*	24,307	15,478	64%	6,753	28%	1,377	6%	654	3%	45	0%
23-436	1	*	812	245	30%	234	29%	163	20%	167	21%	3	0%
19-383	2		5,105	1,394	27%	1,200	24%	1,183	23%	1,328	26%	0	0%
12-465	1		1,034	233	23%	325	31%	234	23%	242	23%	0	0%

# **Report Example - Detail**

Bolded values shown in Configuration screen shot simulate input.

# WYOMING WIC HIGH RISK VENDOR ANALYSIS REPORT

Large Amount of Variation in UPC Prices - Detail Report

Time Period September 1, 2006 through October 30, 2006

Vendor 31-141: 21							
UPC	Txn#	Avg Price	Std Dev	#Std Dev	Actual	Date	Family ID
37439393	23452	\$4.34	\$0.43	1.16	\$4.84	9/3/2006	150870
37439393	23483	\$4.34	\$0.43	1.16	\$4.84	9/13/2006	150841
37439393	25728	\$4.34	\$0.43	1.16	\$4.84	9/24/2006	150870
23738331	24573	\$2.33	\$0.32	1.00	\$2.65	9/3/2006	49357
23738331	21928	\$2.33	\$0.32	1.00	\$2.65	9/3/2006	234833
23738331	23447	\$2.33	\$0.32	1.00	\$2.65	10/24/2006	12340
23738331	23956	\$2.33	\$0.32	1.00	\$2.65	10/24/2006	34263
23738331	24394	\$2.33	\$0.32	1.00	\$2.65	10/30/2006	234833
23738331	26938	\$2.33	\$0.32	1.00	\$2.65	9/6/2006	12340
23738331	28583	\$2.33	\$0.32	1.00	\$2.65	9/24/2006	12340
23738331	23039	\$2.33	\$0.32	1.00	\$2.65	10/11/2006	49357
37439393	23858	\$4.34	\$0.43	0.88	\$4.72	9/6/2006	150870
37439393	23493	\$4.34	\$0.43	0.88	\$4.72	9/15/2006	150870
37439393	23489	\$4.34	\$0.43	0.88	\$4.72	9/22/2006	150870
37439393	23478	\$4.34	\$0.43	0.88	\$4.72	9/26/2006	150841
37439393	25833	\$4.34	\$0.43	0.88	\$4.72	10/1/2006	150870
37439393	23473	\$4.34	\$0.43	0.88	\$4.72	10/1/2006	150841
37439393	23959	\$4.34	\$0.43	0.88	\$4.72	10/30/2006	150870
2738394	29248	\$9.25	\$0.36	0.86	\$9.56	9/15/2006	12340
2738394	28494	\$9.25	\$0.36	0.86	\$9.56	10/1/2006	49357
18393393	28464	\$7.67	\$0.35	0.71	\$7.92	10/12/2006	150841
Vendor 23-442: 2,569	9						
UPC	Txn#	Avg Price	Std Dev	#Std Dev	Actual	Date	Family ID

.....

# 12 Combination Report

This is available in both FI states and EBT states.

# **Inputs**

- High Risk Vendor Candidates and their associated units from the selected query/reports.
  - o FI States Only: The units are:

FI Count above the threshold - Extremely Small Amount of Variation in FI Prices (A)

FI Count above the threshold - Extremely Large % of FIs Redeemed at the Same Price (B)

FI Count above the threshold - Extremely High Average FI Prices (C)

FI Count above the threshold - Redeemed Prices Higher than Price List (D)

FI Count above the threshold - Extremely Large Volume of High Priced FIs (E)

Dollars over Threshold - Volume of WIC Business (F)

Full Period Dollar Variance for vendors above the threshold - Extremely Large Increase In Dollars Redeemed Over Time (G)

FI Count above the threshold - Large # of Participants Redeeming Outside Area (M)

FI Count above the threshold - Large # of Participants Consider High Risk (N)

o EBT States Only: The units are:

Transaction Count above the threshold - Large # of Families Redeeming Outside Area (M)

Transaction Count above the threshold - Large # of Families Consider High Risk (N)

UPC Count above the threshold – Large Volume of Variations in UPC Prices

- Vendor High Risk Factors set in system that are effective at the time of the report.
- Vendor High Risk Factor Weight from Vendor System Admin setup

- Create an (internal) collection grid for each vendor for each "active and report requested" high risk vendor factor with columns for the vendor, score, units (zero at this point) and weight. An "active and report requested" factor is defined in the system administration screen (Combo Report checkbox selected and Deactivate checkbox not selected). The weight column uses either the query weight or the factor weight depending on whether the query was selected on this submitted configuration.
- Query the manually assigned high risk factors (in the online system) for all "non-query based, active and report requested" vendor factors that are effective in relation to the

- execution (or current) date. If the current date is equal to or between the effective and end date, then it is considered effective.
- If this factor is "active and report requested," then during each query/report, load the grid for each vendor that is flagged as potential high risk based on the threshold with its respective units.
- Score each row in collection table. For factors supported by a query, the unit is the units as defined within that query. For manually assigned high risk factors, the unit is 1. The score is the units times the weight.
- Aggregate the score of each vendor in the table.
- Print the report
  - o Print the vendor with the highest aggregate score first.
  - Print vendor factor with their text, score and weight (from highest to lowest). Do not print any score of zero.

# **Report Example**

# UTAH WIC HIGH RISK VENDOR ANALYSIS REPORT

## Combination Report November 5, 2006

High Risk	Score	Units	Weight
Vendor 13-426: 3315			1 202
Extremely Large % of FIs Redeemed at the Same Price (B)	2942	5883	0.5
Extremely High Average FI Prices (C)	373	533	0.7
Vendor 15-832: 1313			
Large # of Participants Consider High Risk (N)	610	3812	0.16
Large # of Participants Redeeming Outside Area (M)	564	3758	0.15
Extremely Large Increase In Dollars of Fls Redeemed Over Time (G)	140	55917	0.0025
Vendor 23-442: 712			
Extremely Small Amount of Variation in FI Prices (A)	514	1284	0.4
Extremely Large Volume of High Priced Fls (E)	108	18	6
Participants and Other Complaints	90	1	90
Vendor 11-034: 542			
Extremely Large % of FIs Redeemed at the Same Price (B)	169	337	0.5
Extremely Large Increase In Dollars of Fls Redeemed Over Time (G)	121	48345	0.0025
Large # of Participants Consider High Risk (N)	93	582	0.16
Large # of Participants Redeeming Outside Area (M)	88	573	0.15
Associations with known violators	60	1	60
Extremely High Average FI Prices (C)	14	20	0.7
Vendor 23-426: 375			
Extremely Small Amount of Variation in FI Prices (A)	272	679	0.4
Extremely Large % of FIs Redeemed at the Same Price (B)	13	26	0.5
Extremely Large Volume of High Priced Fls (E)	90	15	6
Vendor 23-021: 220			
Large # of Participants Consider High Risk (N)	83	516	0.16
Large # of Participants Redeeming Outside Area (M)	77	512	0.15
Associations with known violators	60	1	60
Vendor 23-024: 182			
Extremely Large Increase In Dollars of Fls Redeemed Over Time (G)	92	36909	0.0025
Participants and Other Complaints	90	1	90
Vendor 12-393: 127			
Extremely Large Increase In Dollars of Fls Redeemed Over Time (G)	72	28850	0.0025
Large # of Participants Consider High Risk (N)	28	176	0.16
Large# of Participants Redeeming Outside Area (M)	28	175	0.15
Vendor 12-468: 38			
Extremely Large % of FIs Redeemed at the Same Price (B)	32	63	0.5